

Having described the invention, the following is claimed:

1. A method of tracheal intubation, said method comprising the steps of locating a positioning apparatus relative to a patient's trachea by engaging the patient's Adam's apple with the positioning apparatus, moving a guide rod relative to the positioning apparatus until a leading end portion of the guide rod has moved into the patient's trachea, said step of moving a guide rod relative to the positioning apparatus being performed with the positioning apparatus in engagement with the patient's Adam's apple, and moving a tracheal tube along the guide rod into the patient's trachea.

2. A method as set forth in claim 1 further including the step of disengaging the positioning apparatus from the guide rod prior to performance of said step of moving a tracheal tube along the guide rod into the patient's trachea.

3. A method as set forth in claim 1 wherein said step of moving a guide rod relative to the positioning apparatus includes sliding the guide rod along a guide tube, said method further including separating the guide tube from the guide rod while the leading end portion of the guide rod is in the patient's trachea, and, thereafter, performing said step of moving a tracheal tube along the guide rod into the patient's trachea.

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4. A method as set forth in claim 1 wherein said step of engaging the patient's Adam's apple includes engaging opposite sides of the patient's Adam's apple with the positioning apparatus.

5. A method as set forth in claim 1 further including the step of determining an insertion distance which the guide rod is to be moved into the patient's trachea as a function of the distance between a portion of the positioning apparatus aligned with the patient's Adam's apple and a portion of the positioning apparatus aligned with the patient's mouth, said step of moving a guide rod relative to the positioning apparatus includes moving the guide rod through the insertion distance relative to the positioning apparatus.

6. A method as set forth in claim 1 wherein said step of moving a guide rod relative to the positioning apparatus includes moving the guide rod through a distance which is a function of a distance between a portion of the positioning apparatus aligned with the patient's Adam's apple and a portion of the positioning apparatus aligned with the patient's mouth.

7. A method as set forth in claim 1 further including the step of engaging the tracheal tube with the positioning apparatus during performance of said step of moving the tracheal tube along the guide rod.

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8. A method as set forth in claim 1 wherein said step of moving the guide rod relative to the positioning apparatus is performed with a portion of the guide rod enclosed by the tracheal tube.

9. A method as set forth in claim 1 wherein the positioning apparatus is disposed outside of the patient's body during performance of said step of moving the tracheal tube along the guide rod into the patient's trachea.

10. A method as set forth in claim 1 wherein the positioning apparatus is disposed outside the patient's body during performance of said step of moving a guide rod relative to the positioning apparatus.

11. A method as set forth in claim 1 further including the step of magnetically attracting the leading end portion of the guide rod with a magnet disposed outside of the patient's body during performance of said step of moving a guide rod relative to the positioning apparatus.

12. A method as set forth in claim 1 further including the step of positioning a magnet adjacent to an anterior portion of the patient's trachea and promoting movement of the leading end portion of the guide rod into the patient's trachea under the influence of a magnetic field emanating from the magnet.

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16. A method as set forth in claim 1 further including the step of transmitting an image from the leading end portion of the guide rod to a location outside of the patient to facilitate visualization of tissue disposed in the patient's body adjacent to the leading end portion of the guide rod.

17. A method set forth in claim 1 further including the steps of providing a sensor assembly having an emitter portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod as the guide rod moves into the patient's trachea, positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple at a location outside of the patient's body, and determining when the leading end portion of the guide rod is in a desired position relative to the patient's trachea as a function of a response from the detector portion of the sensor assembly during movement of the guide rod into the patient's trachea.

18. A method as set forth in claim 17 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said

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step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple.

19. A method as set forth in claim 18 wherein said step of moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving a magnet into the patient's trachea with the leading end portion of the guide rod, said step of positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a device which responds to a magnetic field adjacent to the patient's Adam's apple.

20. A method as set forth in claim 17 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's Apple.

21. A method as set forth in claim 20 wherein said step of moving the detector portion of the sensor assembly

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22. A method as set forth in claim 1 wherein said step of moving a guide rod into the patient's trachea includes moving a plurality of expandable elements into the patient's trachea with the guide rod and expanding at least one of the plurality of expandable elements as the leading end portion of the guide rod is moved relative to the patient's trachea.

23. A method as set forth in claim 1 wherein said step of moving the guide rod into the patient's trachea includes steering the leading end portion of the guide rod by expanding an expandable element connected with the leading end portion of the guide rod.

24. A method as set forth in claim 1 wherein said step of moving a guide rod into the patient's trachea includes moving a light source with the leading end portion of the guide rod and detecting when the light source is in a position corresponding to a desired position of the leading

25. A method as set forth in claim 1 wherein said step of moving the tracheal tube along the guide rod into the patient's trachea is at least partially performed with the guide rod extending into a passage in the tracheal tube.

27. A method as set forth in claim 1 further including the step of providing a display illustrating a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube along the guide rod into the patient's trachea.

28. A method as set forth in claim 1 further including the steps of providing a display illustrating a position of the leading end portion of the guide rod relative to the patient's trachea and a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube along the guide rod into the patient's trachea.

29. A method set forth in claim 1 further including the steps of providing a sensor assembly having an emitter portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube as the tracheal tube moves into the patient's trachea, positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple at a location outside of the patient's body, and determining when the leading end portion of the tracheal tube is in a desired position relative to the patient's trachea as a function of a response from the detector portion of the sensor assembly during movement of the tracheal tube into the patient's trachea.

30. A method as set forth in claim 29 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple.

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31. A method as set forth in claim 30 wherein said step of moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving a magnet into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a device which responds to a magnetic field adjacent to the patient's Adam's apple.

32. A method as set forth in claim 29 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's Apple.

33. A method as set forth in claim 32 wherein said step of moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving a device which responds to magnetic field into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning

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34. A method as set forth in claim 1 wherein said step of moving a tracheal tube into the patient's trachea includes moving a plurality of expandable elements into the patient's trachea with the tracheal tube and expanding at least one of the plurality of expandable elements as the leading end portion of the tracheal tube is moved relative to the patient's trachea.

35. A method as set forth in claim 1 wherein said step of moving the tracheal tube into the patient's trachea includes steering the leading end portion of the guide rod by expanding an expandable element connected with the leading end portion of the tracheal tube.

36. A method as set forth in claim 1 wherein said step of moving a tracheal tube into the patient's trachea includes moving a light source with the leading end portion of the tracheal tube and detecting when the light source is in a position corresponding to a desired position of the leading end portion of the tracheal tube by observing light emitted from the light source from outside of the patient's body.

37. A method of tracheal intubation, said method comprising the steps of moving a first tubular member through a patient's mouth into the patient's pharynx, moving a guide rod through the first tubular member into the patient's trachea, separating the guide rod and first tubular member while maintaining a portion of the guide rod in the patient's trachea, and sliding a tracheal tube along the guide rod into the patient's trachea.

38. A method as set forth in claim 37 further including the step of determining how far the guide rod is to be moved through the first tubular member into the patient's trachea before performance of said step of moving the guide rod through the first tubular member into the patient's trachea.

39. A method as set forth in claim 37 wherein said step of moving a guide rod through the first tubular member into the patient's trachea includes attracting a leading end portion of the guide rod under the influence of a magnetic field emanating from a location adjacent to the patient's trachea.

40. A method as set forth in claim 37 wherein said step of separating the guide rod and the first tubular member includes sliding the first tubular member along the guide rod while maintaining the guide rod in the patient's trachea.

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41. A method as set forth in claim 37 wherein said step of sliding a tracheal tube along the guide rod into the patient's trachea includes sliding an inner side surface of the tracheal tube along the guide rod while maintaining the distance which the guide rod extends into the patient's trachea substantially constant.

42. A method as set forth in claim 37 wherein said step of moving a first tubular member through the patient's mouth in to the patient's pharynx includes locating a portion of the first tubular member relative to the patient's mouth with a positioning apparatus which engages the patient's Adam's apple.

43. A method as set forth in claim 42 wherein the tracheal tube is separate from the positioning apparatus during performance of said step of sliding a tracheal tube along the guide rod into the patient's trachea.

44. A method as set forth in claim 37 wherein said step of moving the guide rod into the patient's trachea includes detecting when a leading end portion of the guide rod is in a position other than a desired position and applying force against the leading end portion of the guide rod to move the leading end portion of the guide rod toward the desired position.

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45. A method as set forth in claim 37 further including the step of transmitting an image from a leading end portion of the guide rod to a location outside of the patient to facilitate visualization of tissue disposed in the patient's body adjacent to the leading end portion of the guide rod.

46. A method set forth in claim 37 further including the steps of providing a sensor assembly having an emitter portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod as the guide rod moves into the patient's trachea, positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple at a location outside of the patient's body, and determining when the leading end portion of the guide rod is in a desired position relative to the patient's trachea as a function of a response from the detector portion of the sensor assembly during movement of the guide rod into the patient's trachea.

47. A method as set forth in claim 46 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said

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step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple.

48. A method as set forth in claim 47 wherein said step of moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving a magnet into the patient's trachea with the leading end portion of the guide rod, said step of positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a device which responds to a magnetic field adjacent to the patient's Adam's apple.

49. A method as set forth in claim 46 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's Apple.

50. A method as set forth in claim 49 wherein said step of moving the detector portion of the sensor assembly

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into the patient's trachea with the leading end portion of the guide rod includes moving a device which responds to magnetic field into the patient's trachea with the leading end portion of the guide rod, said step of positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a magnet adjacent to the patient's Adam's apple.

51. A method of tracheal intubation, said method comprising the steps of locating a positioning apparatus relative to a patient's trachea by engaging the patient's Adam's apple with the positioning apparatus, and moving a tracheal tube through the patient's mouth and at least into the patient's pharynx, said step of moving the tracheal tube through the patient's mouth into the patient's pharynx includes guiding movement of the tracheal tube with the positioning apparatus while the positioning apparatus is in engagement with the patient's Adam's apple.

52. A method as set forth in claim 51 further including the steps of moving a leading end portion of a flexible guide rod away from a leading end portion of the tracheal tube and, thereafter, moving the tracheal tube along the guide rod in the patient's trachea.

53. A method as set forth in claim 52 further including the step of providing an indication of the magnitude of the distance between the patient's Adam's apple and the

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patient's mouth with the positioning apparatus, said step of moving a leading end portion of the guide rod away from the leading end portion of the tracheal tube includes moving the guide rod through a distance which is a function of the indication provided by the positioning apparatus.

54. A method as set forth in claim 52 further including the step of attracting the leading end portion of the guide rod with a magnetic field during performance of said step of moving the guide rod away from a leading end portion of the tracheal tube.

55. A method as set forth in claim 52 further including the step of separating the flexible guide rod from the tracheal tube while maintaining a portion of the tracheal tube in the patient's trachea.

56. A method as set forth in claim 52 wherein said step of engaging the patient's Adam's apple with the positioning apparatus includes engaging opposite sides of the patient's Adam's apple with the positioning apparatus.

57. A method as set forth in claim 52 wherein said step of moving the leading end portion of the guide rod away from the leading end portion of the tracheal tube includes sliding the guide along the tracheal tube while the tracheal tube is held in a desired position relative to the patient's trachea by the positioning apparatus.

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58. A method as set forth in claim 52 wherein said step of moving a leading end portion of the guide rod away from a leading end portion of the tracheal tube is performed with a portion of the guide rod enclosed by the tracheal tube.

59. A method as set forth in claim 51 wherein said step of moving the tracheal tube at least into the patient's pharynx includes moving a leading end portion of the tracheal tube into the patient's trachea, detecting when the leading end portion of the tracheal tube is in a position other than a desired position, and applying force against the leading end portion of the tracheal tube to move the leading end portion of the tracheal tube toward the desired position.

60. A method as set forth in claim 51 further including the step of transmitting an image from the leading end portion of the tracheal tube to a location outside of the patient to facilitate visualization of tissue disposed in the patient's body adjacent to the leading end portion of the tracheal tube.

61. A method set forth in claim 51 further including the steps of providing a sensor assembly having an emitter portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the

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sensor assembly into the patient's trachea with a leading end portion of the tracheal tube, positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple at a location outside of the patient's body, and determining when the leading end portion of the tracheal tube is in a desired position relative to the patient's trachea as a function of a response from the detector portion of the sensor assembly.

62. A method as set forth in claim 61 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple.

63. A method as set forth in claim 62 wherein said step of moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving a magnet into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning the detector portion of the sensor assembly adjacent to the patient's Adam's

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apple includes positioning a device which responds to a magnetic field adjacent to the patient's Adam's apple.

64. A method as set forth in claim 61 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's Apple.

65. A method as set forth in claim 64 wherein said step of moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the tracheal tube includes moving a device which responds to magnetic field into the patient's trachea with the leading end portion of the tracheal tube, said step of positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a magnet adjacent to the patient's Adam's apple.

66. A method as set forth in claim 51 wherein said step of moving the tracheal tube into the patient's pharynx includes moving a leading end portion of the tracheal tube,

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into the patient's trachea, moving a plurality of expandable elements into the patient's trachea with the leading end portion of the tracheal tube, and expanding at least one of the plurality of expandable elements as the leading end portion of the tracheal tube is moved relative to the patient's trachea.

67. A method as set forth in claim 51 wherein said step of moving the tracheal tube into the patient's pharynx includes moving a leading end portion of the tracheal tube into the patient's trachea and steering the leading end portion of the tracheal tube by expanding an expandable element connected with the leading end portion of the tracheal tube.

68. A method as set forth in claim 51 wherein said step of moving a tracheal tube into the patients pharynx includes moving a leading end portion of the tracheal tube into the patient's trachea, moving a light source into the patient's trachea with the leading end portion of the tracheal tube, and detecting when the light source is in a position corresponding to a desired position of the leading end portion of the tracheal tube by observing light emitted from the light source from outside of the patient's body.

69. A method of tracheal intubation, said method comprising the steps of moving a flexible guide rod into the patient's trachea, said step of moving a guide rod into the

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patient's trachea includes attracting a leading end portion of the guide rod with a magnetic field emanating from a location which is outside of the patient's body and is adjacent to the patient's larynx, and moving a tracheal tube along the guide rod into the patient's trachea.

70. A method as set forth in claim 69 wherein said step of moving a flexible guide rod into the patient's trachea further includes moving the magnetic field away from the patient's larynx in a direction toward the patient's bronchial tubes while attracting the leading end portion of the guide rod.

71. A method as set forth in claim 69 further including the step of locating a positioning apparatus relative to the patient's trachea by engaging the patient's Adam's apple with the positioning apparatus, said step of moving a guide rod into the patient's trachea includes moving the guide rod along a surface which is positioned relative to the patient's trachea by the positioning apparatus.

72. A method as set forth in claim 71 wherein said step of sliding the guide rod along a surface which is positioned relative to the patient's trachea by the positioning apparatus includes moving the guide rod through a guide member into the patient's trachea, said method further includes separating the guide member from the guide rod while maintaining the guide rod in the

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patient's trachea, said step of moving a tracheal tube along the guide rod is performed after performing said step of separating the guide member from the guide rod.

73. A method as set forth in claim 71 wherein said step of moving the guide rod along a surface which is positioned relative to the patient's trachea by the positioning apparatus includes moving the guide rod along a surface in the tracheal tube while the tracheal tube is positioned relative to the patient's trachea by the positioning apparatus.

74. A method of tracheal intubation, said method comprising the steps of locating a positioning apparatus relative to a patient's trachea by engaging a portion of the patient's body spaced from the patient's head with the positioning apparatus, determining a distance through which a guide rod is to be moved relative to the patient's trachea as a function of spacing between locations on the positioning apparatus when the positioning apparatus is disposed in engagement with the portion of the patient's body spaced from the patient's head, moving the guide rod relative to the positioning apparatus and into the patient's trachea, said step of moving a guide rod relative to the positioning apparatus and into the patient's trachea includes moving the guide rod through the distance which is a function of spacing between locations on the positioning apparatus when the positioning apparatus is

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disposed in engagement with the portion of the patient's body spaced from the patient's head, and moving a tracheal tube along the guide rod into the patient's trachea.

75. A method as set forth in claim 74 wherein said step of moving a guide rod relative to the positioning apparatus and into the patient's trachea includes moving at least a portion of the guide rod through a portion of the positioning apparatus which is aligned with the patient's mouth.

76. A method as set forth in claim 74 wherein said step of locating the positioning apparatus relative to the patient's trachea includes varying the spatial relationship between first and second portions of the positioning apparatus, said step of determining a distance through which the guide rod is to be moved relative to the patient's trachea includes determining the distance as a function of the spatial relationship between the first and second portions of the positioning apparatus after the positioning apparatus has been located relative to the patient's body and when the positioning apparatus is disposed in engagement the with the portion of the patient's body spaced from the patient's head.

77. A method as set forth in claim 74 further including the step of disengaging the positioning apparatus from the guide rod prior to performance of said step of moving a

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tracheal tube along the guide rod into the patient's trachea, said step of disengaging the positioning apparatus from the guide rod is performed with a portion of the guide rod in the patient's trachea.

78. A method as set forth in claim 74 wherein said step of moving a guide rod relative to the positioning apparatus includes sliding the guide rod along a guide tube, said method further including separating the guide tube from the guide rod while the leading end portion of the guide rod is in the patient's trachea, and, thereafter, performing said step of moving a tracheal tube along the guide rod into the patient's trachea with the tracheal tube spaced from the positioning apparatus.

79. A method as set forth in claim 74 wherein said step of engaging a portion of the patient's body spaced from the patient's head with the positioning apparatus includes engaging the patient's Adam's apple with the positioning apparatus to locate one of the locations on the positioning apparatus relative to the patient's body.

80. A method as set forth in claim 74 further including the step of engaging the tracheal tube with a portion of the positioning apparatus aligned with the patient's mouth during performance of said step of moving the tracheal tube along the guide rod, said step of moving the tracheal tube along the guide rod being performed with the

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81. A method as set forth in claim 74 wherein said step of moving the guide rod relative to the positioning apparatus is performed with a portion of the guide rod disposed in the patient's body enclosed by the tracheal tube.

82. A method as set forth in claim 74 wherein the positioning apparatus is disposed outside of the patient's body during performance of said step of moving the tracheal tube along the guide rod into the patient's trachea.

83. A method as set forth in claim 74 wherein the positioning apparatus is disposed outside the patient's body during performance of said step of moving a guide rod relative to the positioning apparatus.

84. A method as set forth in claim 74 further including the step of magnetically attracting a leading end portion of the guide rod with a magnet disposed outside of the patient's body during performance of said step of moving a guide rod relative to the positioning apparatus.

85. A method as set forth in claim 74 further including the step of positioning a magnet adjacent to the patient's

larynx and promoting movement of a leading end portion of the guide rod into the patient's trachea under the influence of a magnetic field emanating from the magnet during movement of the guide rod relative to the positioning apparatus.

86. A method as set forth in claim 74 wherein said step of moving the guide rod into the patient's trachea includes detecting when a leading end portion of the guide rod is in a position other than a desired position and applying force against the leading end portion of the guide rod to move the leading end portion of the guide rod toward the desired position.

87. A method as set forth in claim 74 further including the step of engaging a tongue in a mouth of the patient with a laryngoscope connected with the positioning apparatus during movement of the guide rod into the patient's trachea.

88. A method as set forth in claim 74 further including the step of transmitting an image from the leading end portion of the guide rod to a location outside of the patient to facilitate visualization of tissue disposed in the patient's body adjacent to the leading end portion of the guide rod.

89. A method set forth in claim 74 further including the steps of providing a sensor assembly having an emitter

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portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod as the guide rod moves into the patient's trachea, positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple at a location outside of the patient's body, and determining when the leading end portion of the guide rod is in a desired position relative to the patient's trachea as a function of a response from the detector portion of the sensor assembly during movement of the guide rod into the patient's trachea.

90. A method as set forth in claim 89 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple.

91. A method as set forth in claim 91 wherein said step of moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of

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the guide rod includes moving a magnet into the patient's trachea with the leading end portion of the guide rod, said step of positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a device which responds to a magnetic field adjacent to the patient's Adam's apple.

92. A method as set forth in claim 89 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple.

93. A method as set forth in claim 92 wherein said step of moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving a device which responds to magnetic field into the patient's trachea with the leading end portion of the guide rod, said step of positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a magnet adjacent to the patient's Adam's apple.

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94. A method as set forth in claim 74 wherein said step of moving a guide rod into the patient's trachea includes moving a plurality of expandable elements into the patient's trachea with the guide rod and expanding at least one of the plurality of expandable elements as the leading end portion of the guide rod is moved relative to the patient's trachea.

95. A method as set forth in claim 74 wherein said step of moving the guide rod into the patient's trachea includes steering the leading end portion of the guide rod by expanding an expandable element connected with the leading end portion of the guide rod.

96. A method as set forth in claim 74 wherein said step of moving a guide rod into the patient's trachea includes moving a light source with the leading end portion of the guide rod and detecting when the light source is in a position corresponding to a desired position of the leading end portion of the guide rod by observing light emitted from the light source from outside of the patient's body.

97. A method as set forth in claim 74 further including the step of providing a display illustrating a position of the leading end portion of the guide rod relative to the patient's trachea during at least a portion of said step of moving the guide rod relative to the positioning apparatus.

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98. A method as set forth in claim 74 further including the step of providing a display illustrating a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube along the guide rod into the patient's trachea.

99. A method as set forth in claim 74 further including the steps of providing a display illustrating a position of the leading end portion of the guide rod relative to the patient's trachea and a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube along the guide rod into the patient's trachea.

100. A method of treating a patient, said method comprising moving a leading end portion of a member disposed in a patient's body relative to body tissue, said step of moving a leading end portion of a member relative to body tissue includes attracting the leading end portion of the member with a magnetic field emanating from a location outside of the patient's body.

101. A method as set forth in claim 100 wherein said step of attracting a leading end portion of the member includes inducing the leading end portion of the member to move from a position offset to one side of an opening into the opening.

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104. A method as set forth in claim 100 further including the step of moving the magnetic field relative to the patient's body tissue while maintaining a source of the magnetic field outside of the patient's body.

105. A method of positioning a member relative to body tissue, said method comprising the steps of applying force against a first portion of the member, moving the member relative to tissue in a body of a patient under the influence of the force applied to the first portion of the member, and changing a path of movement of the member

relative to the body tissue while continuing to move the member relative to the body tissue under the influence of force applied to the first portion of the member, said step of changing the path of movement of the member relative to body tissue includes attracting a second portion of the member with a magnetic field having a source disposed outside of the patient's body.

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106. A method as set forth in claim 105 further including moving the source of the magnetic field relative to the patient's body as the member moves relative to the body tissue.

107. An apparatus for use in positioning a tracheal tube relative to a patient's trachea, said apparatus comprising a positioning assembly which is engagable with the patient's Adam's apple to locate the positioning assembly relative to the patient's body, a guide surface connected with the positioning assembly, and a flexible guide rod which moves relative to the guide surface into the patient's trachea, said flexible guide rod having a surface which is engagable with the tracheal tube to guide movement of the tracheal tube through the patient's mouth into the patient's trachea.

108. An apparatus as set forth in claim 107 wherein said positioning assembly is engagable with a plurality of

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locations adjacent to the patient's Adam's apple to locate the positioning assembly relative to the patient's trachea.

109. An apparatus as set forth in claim 107 wherein the positioning assembly includes a first section which is engagable with the patient's Adam's apple and a second section which is connected with said guide surface, said first and second sections of said positioning assembly being movable relative to each other to accommodate patients having different distances between their Adam's apple and mouth.

110. An apparatus as set forth in claim 107 further including a guide tube which is connected with said positioning assembly, said guide surface being disposed within said guide tube.

111. An apparatus as set forth in claim 107 wherein said guide surface is disposed on said positioning assembly and is engaged by the tracheal tube during movement of the tracheal tube through the patient's mouth into the patient's trachea.

112. An apparatus as set forth in claim 107 further including first indicia connected with said positioning assembly to provide an indication which is a function of a distance which the guide rod is to be moved relative to the guide surface and second indicia which is connected with

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the guide rod to provide an indication which is a function of a distance which the guide rod has moved relative to the guide surface.

113. An apparatus as set forth in claim 107 further including display means for displaying an illustration depicting a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of the movement of the tracheal tube into the patient's trachea.

114. An apparatus as set forth in claim 107 further including display means for displaying an illustration depicting a position of a leading end portion of said flexible guide rod relative to the patient's trachea during at least a portion of the movement of the flexible guide rod into the patient's trachea.

115. An apparatus as set forth in claim 107 further including display means for displaying an illustration depicting a position of a leading end portion of said guide rod relative to the patient's trachea and a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of the movement of the tracheal tube into the patient's trachea.

116. A method of tracheal intubation, said method comprising the steps of locating a positioning apparatus

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117. A method as set forth in claim 116 wherein said step of moving a guide rod into the patient's trachea includes moving at least a portion of the guide rod through a portion of the positioning apparatus which is aligned with the patient's mouth.

118. A method as set forth in claim 116 wherein said step of locating the positioning apparatus relative to the patient's trachea includes varying the spatial relationship between first and second portions of the positioning apparatus, said step of determining a position to which the guide rod is to be moved relative to the patient's trachea includes determining the position as a function of the spatial relationship between the first and second portions of the positioning apparatus after the positioning apparatus has been located relative to the patient's body and when

120. A method as set forth in claim 116 wherein said step of moving a guide rod relative to the positioning apparatus includes sliding the guide rod along a guide surface connected with the positioning apparatus, said method further including separating the positioning apparatus from the guide rod while the guide rod extends into the patient's trachea, and, thereafter, performing said step of moving a tracheal tube along the guide rod into the patient's trachea.

121. A method as set forth in claim 116 wherein said step of engaging a portion of the patient's Adam's apple with the positioning apparatus includes engaging opposite sides of the patient's Adam's apple with the positioning apparatus.

122. A method as set forth in claim 116 further including the step of engaging the tracheal tube with a portion of the positioning apparatus aligned with the patient's mouth during performance of said step of sliding the tracheal tube along the guide rod, said step of sliding the tracheal tube along the guide rod being performed with the positioning apparatus disposed in engagement with the patient's Adam's apple.

123. A method as set forth in claim 116 wherein said step of moving the guide rod into the patient's trachea apparatus is performed with a portion of the guide rod enclosed by the tracheal tube.

124. A method as set forth in claim 116 wherein the positioning apparatus is disposed outside of the patient's body during performance of said step of moving the tracheal tube along the guide rod into the patient's trachea.

125. A method as set forth in claim 116 wherein the positioning apparatus is disposed outside the patient's body during performance of said step of moving a guide rod into the patient's trachea.

126. A method as set forth in claim 116 further including the step of magnetically attracting a leading end portion of the guide rod with a magnet disposed outside of

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patient to facilitate visualization of tissue disposed in the patient's body adjacent to the leading end portion of the guide rod.

131. A method set forth in claim 116 further including the steps of providing a sensor assembly having an emitter portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with a leading end portion of the guide rod as the guide rod moves into the patient's trachea, positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple at a location outside of the patient's body, and determining when the leading end portion of the guide rod is in a desired position relative to the patient's trachea as a function of a response from the detector portion of the sensor assembly during movement of the guide rod into the patient's trachea.

132. A method as set forth in claim 131 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's

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apple includes positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple.

133. A method as set forth in claim 132 wherein said step of moving the emitter portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving a magnet into the patient's trachea with the leading end portion of the guide rod, said step of positioning the detector portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a device which responds to a magnetic field adjacent to the patient's Adam's apple.

134. A method as set forth in claim 131 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the patient's Adam's apple includes positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's Apple.

135. A method as set forth in claim 134 wherein said step of moving the detector portion of the sensor assembly into the patient's trachea with the leading end portion of the guide rod includes moving a device which responds to

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magnetic fields into the patient's trachea with the leading end portion of the guide rod, said step of positioning the emitter portion of the sensor assembly adjacent to the patient's Adam's apple includes positioning a magnet adjacent to the patient's Adam's apple.

136. A method as set forth in claim 116 wherein said step of moving a guide rod into the patient's trachea includes moving a plurality of expandable elements into the patient's trachea with the guide rod and expanding at least one of the plurality of expandable elements as the leading end portion of the guide rod is moved relative to the patient's trachea.

137. A method as set forth in claim 116 wherein said step of moving the guide rod into the patient's trachea includes steering the leading end portion of the guide rod by expanding an expandable element connected with the leading end portion of the guide rod.

138. A method as set forth in claim 116 wherein said step of moving a guide rod into the patient's trachea includes moving a light source with the leading end portion of the guide rod and detecting when the light source is in a position corresponding to a desired position of the leading end portion of the guide rod by observing light emitted from the light source from outside of the patient's body.

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139. A method of tracheal intubation, said method comprising the steps of locating a first portion of a positioning apparatus relative to a patient's trachea by engaging the patient's Adam's apple with the first portion of the positioning apparatus, moving a guide rod relative to the positioning apparatus until a leading end portion of the guide rod has moved into the patient's trachea to a location adjacent to the first portion of the positioning apparatus, said step of moving a guide rod relative to the positioning apparatus being performed with the first portion positioning apparatus in engagement with the patient's Adam's apple, and guiding movement of the tracheal tube into the patient's trachea with the guide rod.

140. A method as set forth in claim 139 further including the step of disengaging the positioning apparatus from the guide rod prior to performance of said step of guiding movement of the tracheal tube into the patient's trachea with the guide rod.

141. A method as set forth in claim 139 wherein said step of moving a guide rod relative to the positioning apparatus includes sliding the guide rod along a guide surface, said method further including separating the guide surface from the guide rod while the leading end portion of the guide rod is in the patient's trachea, and, thereafter, performing said step of guiding movement of the tracheal tube into the patient's trachea with the guide rod.

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142. A method as set forth in claim 139 wherein said step of engaging the patient's Adam's apple with the first portion of the positioning apparatus includes engaging opposite sides of the patient's Adam's apple with the first portion of the positioning apparatus.

143. A method as set forth in claim 139 further including the step of determining a position to which the guide rod is to be moved relative to the positioning apparatus, said step of moving a guide rod relative to the positioning apparatus includes moving the guide rod to the previously determined position relative to the positioning apparatus.

144. A method as set forth in claim 139 wherein said step of moving a guide rod relative to the positioning apparatus includes moving the guide rod through a distance which is a function of a distance between the first portion of the positioning apparatus and a portion of the positioning apparatus aligned with the patient's mouth.

145. A method as set forth in claim 139 further including the step of engaging the tracheal tube with the positioning apparatus during performance of said step of guiding movement of the tracheal tube with the guide rod.

146. A method as set forth in claim 139 wherein said step of moving the guide rod relative to the positioning

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apparatus is performed with a portion of the guide rod enclosed by the tracheal tube.

147. A method as set forth in claim 139 wherein the positioning apparatus is disposed outside of the patient's body during performance of said step of guiding movement of the tracheal tube with the guide rod.

148. A method as set forth in claim 139 wherein the positioning apparatus is disposed outside the patient's body during performance of said step of moving a guide rod relative to the positioning apparatus.

149. A method as set forth in claim 139 further including the step of magnetically attracting the leading end portion of the guide rod with a magnet disposed outside of the patient's body during performance of said step of moving a guide rod relative to the positioning apparatus.

150. A method as set forth in claim 139 further including the step of positioning a magnet adjacent to an anterior portion of the patient's trachea and promoting movement of the leading end portion of the guide rod into the patient's trachea under the influence of a magnetic field emanating from the magnet.

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151. A method as set forth in claim 139 wherein said step of locating a positioning apparatus relative to a patient's trachea includes moving the first portion of the positioning apparatus and a second portion of the positioning apparatus relative to each other to positions which are a function of the distance from the patient's Adam's apple to the patient's mouth, and providing a visible indication of the relative positions of the first and second portions of the positioning apparatus, said step of moving the guide rod relative to the positioning apparatus includes moving the guide rod relative to the positioning apparatus to a position which is a function of the relative positions of the first and second portions of the positioning apparatus.

152. A method of tracheal intubation, said method comprising the steps of moving a tracheal tube into a patient's trachea, transmitting an image of body tissue adjacent to a leading end portion of the tracheal tube to a location outside of the patient's body to facilitate visualization of tissue disposed in the patient's body adjacent to the leading end portion of the tracheal tube, and interrupting movement of the tracheal tube into the patient's trachea when an image of body tissue adjacent to the leading end portion of the tracheal tube indicates that the leading end portion of the tracheal tube has moved to a desired position relative to the patient's trachea.

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153. A method as set forth in claim 152 further including the step of applying force against the leading end portion of the tracheal tube to alter a course along which the leading end portion of the tracheal tube is moving when an image of body tissue adjacent to the leading end portion of the tracheal tube indicates that the leading end portion of tracheal tube is moving along a course other than a desired course.

154. A method as set forth in claim 153 wherein said step of applying force against the leading end portion of the tracheal tube includes expanding an expandable element to press a first portion of the expandable element against body tissue adjacent to the leading end portion of the tracheal tube and to press a second portion of the expandable element against the leading end portion of the tracheal tube.

155. A method as set forth in claim 152 further including the step of moving a light source relative to the patient's trachea with the leading end portion of the tracheal tube and illuminating the body tissue adjacent to the leading end portion of the tracheal tube with the light source.

156. A method as set forth in claim 152 wherein said step of moving the tracheal tube into the trachea includes moving the leading end portion of the tracheal tube

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between vocal cords in the patient's body, said step of transmitting an image of body tissue to a location outside of the patient's body includes transmitting an image of at least a portion of one of the vocal chords.

157. A method as set forth in claim 152 wherein said step of moving the tracheal tube into the trachea includes moving the leading end portion of the tracheal tube from the patient's pharynx into the patient's larynx, said step of transmitting an image of body tissue to a location outside of the patient's body includes transmitting an image of at least a portion of a junction between the pharynx and the larynx in the patient's body.

158. A method as set forth in claim 157 further including the step of applying force against the leading end portion of the tracheal tube to urge the leading end portion of the tracheal tube toward an entrance to the patient's larynx when the leading end portion of the tracheal tube is adjacent to the junction between the pharynx and larynx.

159. A method as set forth in claim 152 further including the step of engaging the patient's Adam's apple with a positioning apparatus, said step of moving the tracheal tube into the patient's trachea includes guiding movement of the tracheal tube with the positioning apparatus.

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160. A method of tracheal intubation, said method comprising the steps of moving a tracheal tube relative to a patient's respiratory system along an insertion path which extends from the patient's pharynx, through the patient's larynx and into the patient's trachea, determining the position of a leading end portion of the tracheal tube during movement of the tracheal tube along the insertion path, and steering the leading end portion of the tracheal tube by applying force against the leading end portion of the tracheal tube during movement of the tracheal tube along the insertion path.

161. A method as set forth in claim 160 wherein said step of determining the position of the leading end portion of the tracheal tube along the insertion path includes providing a sensor assembly having an emitter portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the sensor assembly along the insertion path with the leading end portion of the tracheal tube, and positioning one of the emitter and detector portions of the sensor assembly adjacent to an outer surface of the patient's neck.

162. A method as set forth in claim 161 further including the steps of moving a magnet along the insertion path with the leading end portion of the tracheal tube, and positioning a device which responds to a magnetic field

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adjacent to an outer surface of the patient's neck, said step of determining the position of the leading end portion of the tracheal tube includes determining the position of the leading end portion of the tracheal tube as a function of an output of the device which responds to a magnetic field.

163. A method as set forth in claim 161 further including the steps of moving a device which responds to a magnetic field along the insertion path with the leading end portion of the tracheal tube, and positioning a magnet adjacent to an outer surface of the patient's neck, said step of determining the position of the leading end portion of the tracheal tube includes determining the position of the leading end portion of the tracheal tube as a function of an output from the device which responds to a magnetic field.

164. A method as set forth in claim 160 wherein said step of steering the leading end portion of the tracheal tube includes moving an expandable element along the insertion path with the leading end portion of the tracheal tube, and deflecting the leading end portion of the tracheal tube in a first direction by expanding the expandable element in a second direction which is opposite to the first direction.

165. A method as set forth in claim 160 further including the step of engaging the patient's Adam's apple with a positioning apparatus, said step of moving the

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tracheal tube into the patient's trachea includes guiding movement of the tracheal tube with the positioning apparatus.

166. A method as set forth in claim 160 further including the step of positioning a guide rod relative to the patient's respiratory system with the guide rod extending from the patient's pharynx, through the patient's larynx and into the patient's trachea, said step of moving a tracheal tube along an insertion path includes sliding the tracheal tube along the guide rod.

167. A method as set forth in claim 160 further including the steps of locating a positioning apparatus relative to the patient's trachea by engaging the patient's Adam's apple with the positioning apparatus, moving a guide rod relative to the positioning apparatus along the insertion path until a leading end portion of the guide rod has moved into the patient's trachea, said step of moving the guide rod relative to the positioning apparatus being performed with the positioning apparatus in engagement with the patient's Adam's apple, said step of moving the tracheal tube along the insertion path includes sliding the tracheal tube along the guide rod.

168. A method as set forth in claim 160 further including the step of providing a display illustrating a position of a leading end portion of the tracheal tube

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169. A method of tracheal intubation, said method comprising the steps of positioning a plurality of detectors in an array adjacent to an outer surface of a patient's neck, moving a tracheal tube relative to the patient's respiratory system along an insertion path which extends from the patient's pharynx, through the patient's larynx and into the patient's trachea, emitting an output at a leading end portion of the tracheal tube as the tracheal tube moves along the insertion path, detecting the output emitted at the leading end portion of the tracheal tube with detectors of the plurality of detectors, and determining the position of the leading end portion of the tracheal tube along the insertion path as a function of the relationship of the emitted output detected by one detector of the plurality of detectors to the emitted output detected by another detector of the plurality of detectors.

170. A method as set forth in claim 169 wherein said step of emitting an output at a leading end portion of the tracheal tube includes emitting a magnetic field from a magnet connected with the leading end portion of the tracheal tube.

171. A method as set forth in claim 169 further including the steps of locating a positioning apparatus relative to the patient's trachea, moving a guide rod relative to the patient's respiratory system along an insertion path which extends from the patient's pharynx, through the patient's larynx and into the patient's trachea, emitting an output at a leading end portion of the guide rod as the guide rod moves along the insertion path, detecting the output emitted at the leading end portion of the guide rod with detectors of the plurality of detectors, and determining the position of the leading end portion of the guide rod along the insertion path as a function of the relationship of the emitted output detected by one of the plurality of detectors to the emitted output detected by another detector of the plurality of detectors, said step of moving the tracheal tube relative to the patient's respiratory system along the insertion path includes moving the tracheal tube along the guide rod.

172. A method as set forth in claim 171 wherein said step of locating the positioning apparatus relative to the patient's trachea includes engaging the patient's Adam's apple with the positioning apparatus.

173. A method as set forth in claim 172 wherein said step of positioning a plurality of detectors in an array adjacent to an outer surface of the patient's neck includes

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positioning the detectors adjacent to the patient's Adam's apple.

174. A method as set forth in claim 171 further including the steps of providing a display illustrating a position of the leading end portion of the guide rod relative to the patient's trachea and a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube along the guide rod.

175. A method as set forth in claim 171 further including the step of providing a display illustrating a position of the leading end portion of the guide rod relative to the patient's trachea during at least a portion of said step of moving the guide rod relative to the patient's respiratory system.

176. A method as set forth in claim 169 further including the step of providing a display illustrating a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube relative to the patient's respiratory system.

177. A method as set forth in claim 169 wherein said step of emitting an output at a leading end portion of the

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tracheal tube includes emitting light at the leading end portion of the tracheal tube.

178. A method as set forth in claim 169 wherein said step of positioning a plurality of detectors in an array adjacent to an outer surface of the patient's neck includes positioning the plurality of detectors in an array which extends at least part way around the patient's Adam's apple.

179. A method as set forth in claim 169 wherein said step of moving the tracheal tube relative to the patient's respiratory system along an insertion path includes determining when the leading end portion of the tracheal tube approaches a junction between the patient's respiratory system and the patient's esophagus, and steering the leading end portion of the tracheal tube away from the patient's esophagus by applying force against the leading end portion of the tracheal tube.

180. A method as set forth in claim 179 wherein said step of steering the leading end portion of the tracheal tube includes expanding an expandable element to urge the leading end portion of the tracheal tube in direction away from an entrance to the patient's esophagus.

181. A method of tracheal intubation, said method comprising the steps of positioning a plurality of emitters in

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an array adjacent to an outer surface of a patient's neck, moving a tracheal tube relative to the patient's respiratory system along an insertion path which extends from the patient's pharynx, through the patient's larynx and into the patient's trachea, emitting an output from the emitters of the plurality of emitters as the tracheal tube moves along the insertion path, detecting the output emitted by at least some of the emitters with a detector connected with a leading end portion of the tracheal tube as the tracheal tube moves along the insertion path, and determining the position of the leading end portion of the tracheal tube along the insertion path as a function of the output from the plurality of emitters detected by the detector.

182. A method as set forth in claim 181 wherein said step of positioning a plurality of emitters in an array adjacent to an outer surface of the patient's neck includes positioning a plurality of magnets which emit magnetic fields adjacent to the outer surface of the patient's neck.

183. A method as set forth in claim 181 further including the steps of locating a positioning apparatus relative to the patient's trachea, moving a guide rod relative to the patient's respiratory system along an insertion path which extends from the patient's pharynx, through the patient's larynx and into the patient's trachea, detecting the output emitted by at least some of the emitters with a detector connected with a leading end

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portion of the guide rod as the guide rod moves along the insertion path, and determining the position of the leading end portion of the guide rod along the insertion path as a function of the output emitted from the plurality of emitters detected by the detector, said step of moving the tracheal tube relative to the patient's respiratory system along the insertion path includes moving the tracheal tube along the guide rod.

184. A method as set forth in claim 183 wherein said step of locating the positioning apparatus relative to the patient's trachea includes engaging the patient's Adam's apple with the positioning apparatus.

185. A method as set forth in claim 184 wherein said step positioning a plurality of emitters in an array adjacent to an outer surface of the patient's neck includes positioning the emitters adjacent to the patient's Adam's apple.

186. A method as set forth in claim 183 further including the steps of providing a display illustrating a position of the leading end portion of the guide rod relative to the patient's trachea and a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube along the guide rod.

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187. A method as set forth in claim 183 further including the step of providing a display illustrating a position of the leading end portion of the guide rod relative to the patient's trachea during at least a portion of said step of moving the guide rod relative to the patient's respiratory system.

188. A method as set forth in claim 181 further including the step of providing a display illustrating a position of a leading end portion of the tracheal tube relative to the patient's trachea during at least a portion of said step of moving the tracheal tube relative to the patient's respiratory system.

189. A method of tracheal intubation, said method comprising the steps of positioning an emitter which provides an output adjacent to an outer surface of a patient's neck, moving a guide rod relative to a patient's respiratory system along an insertion path which extends into the patient's trachea, said step of moving the guide rod along the insertion path being performed with a detector connected with a leading end portion of the guide rod, detecting the output emitted from the emitter with the detector as the guide rod moves along the insertion path, interrupting movement of the guide rod along the insertion path in response to the detector detecting that the leading end portion of the guide rod is in a desired position relative to the patient's trachea, moving a tracheal tube along the

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guide rod, said step of moving the tracheal tube along the guide rod being performed with a detector connected with a leading end portion of the tracheal tube, detecting the output emitted from the emitter with the detector connected with the leading end portion of the tracheal tube as the tracheal tube moves along the guide rod, and interrupting movement of the tracheal tube along the guide rod in response to the detector connected with the leading end portion of the tracheal tube detecting that the leading end portion of the tracheal tube is in a desired position relative to the patient's trachea.

190. A method as set forth in claim 189 further including the step of engaging the patient's Adam's apple with a positioning apparatus, said step of moving the guide rod along the insertion path being performed while positioning a portion of the guide rod relative to the insertion path with the positioning apparatus.

191. A method as set forth in claim 190 further including the step of separating the guide rod from the positioning apparatus prior to performing the step of moving the tracheal tube along the guide rod.

192. A method of tracheal intubation, said method comprising the steps of positioning a detector adjacent to an outer surface of a patient's neck, moving a guide rod relative to a patient's respiratory system along an insertion

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path which extends into the patient's trachea, said step of moving the guide rod along the insertion path being performed with an emitter which provides an output connected with a leading end portion of the guide rod, detecting the output emitted from the emitter with the detector as the guide rod moves along the insertion path, interrupting movement of the guide rod along the insertion path in response to the detector detecting that the leading end portion of the guide rod is in a desired position relative to the patient's trachea, moving a tracheal tube along the guide rod, said step of moving the tracheal tube along the guide rod being performed with an emitter which provides an output connected with a leading end portion of the tracheal tube, detecting the output emitted from the emitter with the detector as the tracheal tube moves along the guide rod, and interrupting movement of the tracheal tube along the guide rod in response to the detector detecting that the leading end portion of the tracheal tube is in a desired position relative to the patient's trachea.

193. A method as set forth in claim 192 further including the step of engaging the patient's Adam's apple with a positioning apparatus, said step of moving the guide rod along the insertion path being performed while positioning a portion of the guide rod relative to the insertion path with the positioning apparatus.

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194. A method as set forth in claim 193 further including the step of separating the guide rod from the positioning apparatus prior to performing the step of moving the tracheal tube along the guide rod.

195. An apparatus for use in tracheal intubation, said apparatus comprising a tracheal tube, and a transmitter connected with said tracheal tube and operable to transmit an image of body tissue adjacent to a leading end portion of said tracheal tube to a location outside of the patient's body to facilitate visualization of body tissue disposed adjacent to a leading end portion of said tracheal tube.

196. An apparatus as set forth in claim 195 wherein said transmitter includes a first conduit which conducts light from a source outside of the patient's body to the leading end portion of said tracheal tube and a second conduit which conducts light from the leading end portion of said tracheal tube to a location outside of the patient's body.

197. An apparatus as set forth in claim 195 further including an expandable element connected with the leading end portion of said tracheal tube, said expandable element being expandable in the patient's body to apply force against the leading end portion of said tracheal tube to alter a course along which the leading end portion of said tracheal tube is moving relative to the patient's body.

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198. An apparatus as set forth in claim 195 further including a positioning assembly which is engagable with the patient's Adam's apple to locate the positioning assembly relative to the patient's body and a guide surface connected with said positioning assembly to guide movement of said tracheal tube relative to the patient's body.

199. An apparatus for use in tracheal intubation, said apparatus comprising a tracheal tube, sensor means connected with said tracheal tube for determining the position of a leading end portion of said tracheal tube during movement of said tracheal tube along an insertion path which extends from a patient's pharynx, through the patient's larynx and into the patient's trachea, and steering means connected with a leading end portion of said tracheal tube for applying force against the leading end portion of said tracheal tube during movement of said tracheal tube along the insertion path.

200. An apparatus as set forth in claim 199 further including a positioning assembly which is engagable with the patient's Adam's apple to locate said positioning assembly relative to the patient's body, and a guide surface connected with said positioning assembly to guide movement of said tracheal tube relative to the patient's body.

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201. An apparatus as set forth in claim 199 wherein said sensor means includes an emitter which provides an output and a detector which responds to the output from said emitter, one of said emitter and detector being connected with the leading end portion of said tracheal tube for movement therewith along the insertion path, the outer of said emitter and detector being disposed adjacent to an outer surface of the neck of the patient during movement of said tracheal tube along the insertion path.

202. An apparatus for use in tracheal intubation of a patient, said apparatus comprising a tracheal tube which is moveable along an insertion path into a patient's trachea, an emitter which provides an output, and a detector which responds to the output from said emitter, a first one of said emitter and said detector being connected with said tracheal tube for movement therewith along the inserting path, a second one of said emitter and said detector being disposed adjacent to an outer surface of the patient's neck during movement of said tracheal tube along the insertion path.

203. An apparatus as set forth in claim 202 wherein said emitter includes a magnet which emits a magnetic field and said detector includes a device which responds to a magnetic field.

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204. An apparatus as set forth in claim 202 wherein said emitter is connected with a leading end portion of said tracheal tube for movement therewith along the insertion path.

205. An apparatus as set forth in claim 202 wherein said detector is connected with a leading end portion of said tracheal tube for movement therewith along the insertion path.

206. An apparatus as set forth in claim 202 wherein said emitter is a magnet and said detector is a Hall effect device.

207. An apparatus as set forth in claim 202 further including a positioning assembly which is engagable with the patient's Adam's apple to locate said positioning assembly relative to the patient's body, and a guide surface connected with said positioning assembly to guide movement of said tracheal tube relative to the patient's body.

208. An apparatus for use in tracheal intubation of a patient, said apparatus comprising a tracheal tube which is movable along an insertion path into a patient's trachea, an emitter connected with a leading end portion of said tracheal tube, said emitter being effective to provide an output during movement of said tracheal tube along the

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209. An apparatus as set forth in claim 208 further including steering means connected with the leading end portion of said tracheal tube for applying force against the leading end portion of said tracheal tube during movement of said tracheal tube along the insertion path.

211. An apparatus as set forth in claim 208 wherein said emitter includes a magnet which emits a magnetic field, each of said detectors of said plurality of detectors being responsive to the magnetic field emitted by said magnet.

212. An apparatus as set forth in claim 208 further including a positioning assembly which is engagable with the patient's Adam's apple to locate said positioning assembly, and a guide surface connected with said positioning assembly to guide movement of said tracheal tube relative to the patient's body.

213. An apparatus for use in tracheal intubation of a patient, said apparatus comprising a tracheal tube which is movable along an insertion path into a patient's trachea, a detector connected with a leading end portion of said tracheal tube for movement therewith along the insertion path, and a plurality of emitters disposed in an array adjacent to the patient's Adam's apple, each emitter of said plurality of emitters being effective to provide an output which is detectable by said detector, and means connected with said detector for determining the position of the leading end portion of said tracheal tube as a function of the output from said plurality of emitters detected by said detector during movement of said tracheal tube along the insertion path.

214. An apparatus as set forth in claim 213 further including steering means connected with the leading end portion of said tracheal tube for applying force against the leading end portion of said tracheal tube during movement of said tracheal tube along the insertion path.

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215. An apparatus as set forth in claim 213 further including a plurality of expandable elements connected with the leading end portion of said tracheal tube and means for conducting fluid pressure along said tracheal tube to said expandable elements to effect expansion of said expandable elements.

216. An apparatus as set forth in claim 213 further including a positioning assembly which is engagable with the patient's Adam's apple to locate said positioning assembly, and a guide surface connected with said positioning assembly to guide movement of said tracheal tube relative to the patient's body.

217. An apparatus as set forth in claim 213 wherein each emitter of said plurality of emitters includes a magnet which emits a magnetic field, said detectors being responsive to the magnetic field emitted by said magnet of each of said emitters of said plurality of emitters.

218. An apparatus for use in tracheal intubation of a patient, said apparatus comprising a tracheal tube, and a plurality of expandable elements connected with a leading end portion of said tracheal tube, said expandable elements being expandable in the patient's body to apply force against the leading end portion of said tracheal tube to alter a course along which the leading end portion of said tracheal tube is moving relative to the patient's body.

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219. An apparatus as set forth in claim 218 further including a light source connected with the leading end portion of said tracheal tube.

220. An apparatus as set forth in claim 218 wherein said expandable elements are expandable under the influence of fluid pressure, a plurality of conduits extend along said tracheal tube to said expandable elements to conduct fluid pressure to said expandable elements.

221. An apparatus as set forth in claim 218 further including a position assembly which is engagable with the patient's Adam's apple to locate the positioning assembly relative to the patient's body, and a guide surface connected with said positioning assembly to guide movement of said tracheal tube relative to the patient's body.

222. An apparatus as set forth in claim 218 further including a plurality of light sources disposed in an array on the leading end portion of the tracheal tube to illuminate body tissue adjacent to the leading end portion of the tracheal tube with an intensity which enables the location of the leading end portion of the tracheal tube to be visually located by an observer.

223. A method of tracheal intubation, said method comprising the steps of locating a positioning apparatus

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relative to a patient's trachea by engaging the patient's Adam's apple with the positioning apparatus, providing a sensor system having a first portion, a second portion and a third portion, positioning the first portion of the sensor system adjacent to the patient's Adam's apple, moving a guide rod relative to the positioning apparatus into the patient's respiratory system along an insertion path with the second portion of the sensor system connected with a leading end portion of the guide rod, said step of moving the guide rod relative to the positioning apparatus being performed with the positioning apparatus in engagement with the patient's Adam's apple, determining when the leading end portion of the guide rod is in a desired position relative to the patient's trachea as a function of cooperation between the first portion of the sensor system positioned adjacent to the patient's Adam's apple and the second portion of the sensor system connected with the leading end portion of the guide rod, interrupting movement of the guide rod relative to the positioning apparatus in response to determining that the leading end portion of the guide rod is in the desired position relative to the patient's trachea, thereafter, disengaging the positioning apparatus from the guide rod, moving a tracheal tube along the guide rod into the patient's trachea with the third portion of the sensor system connected with a leading end portion of the tracheal tube, determining when the leading end portion of the tracheal tube is in a desired

position relative to the patient's trachea as a function of cooperation between the first portion of the sensor system positioned adjacent to the patient's Adam's apple and the third portion of the sensor system connected with the leading end portion of the tracheal tube, and interrupting movement of the tracheal tube relative to the guide rod in response to determining that the leading end portion of the tracheal tube is in the desired position relative to the patient's trachea.

224. A method as set forth in claim 223 further including the step of steering the leading end portion of the guide rod as the leading end portion of the guide rod moves along the insertion path by expanding an expandable element connected with the leading end portion of the guide rod.

225. A method of treating a patient, said method comprising the steps of locating a positioning apparatus relative to a portion of the patient's body by engaging the patient's body with the positioning apparatus, determining a position to which a elongated member is to be moved relative to the positioning apparatus, moving the elongated member into the patient's body while the positioning apparatus is in engagement with the patient's body, interrupting movement of the elongated member into the patient's body when the elongated member has moved to the previously determined position relative to the

1

227. A method as set forth in claim 225 wherein said step of locating the positioning apparatus relative to a portion of the patient's body includes varying the spatial relationship between first and second portions of the positioning apparatus, said step of determining a position to which the elongated member is to be moved relative to the patient's body includes determining the position as a function of the spatial relationship between the first and second portions of the positioning apparatus after the positioning apparatus has been located relative to the patient's body and when the positioning apparatus is disposed in engagement the with the patient's body.

228. A method as set forth in claim 225 further including the step of disengaging the positioning apparatus from the elongated member prior to performance of said step of performing a procedure in the patient's body, said

step of disengaging the positioning apparatus from the elongated member is performed with a portion of the elongated member in the patient's body.

229. A method as set forth in claim 225 wherein said step of moving a guide rod relative to the positioning apparatus includes sliding the elongated member along a guide surface connected with the positioning apparatus, said method further including separating the positioning apparatus from the elongated member while the elongated member extends into the patient's body, and, thereafter, performing said procedure in the patient's body.

230. A method as set forth in claim 225 wherein said step of engaging a portion of the patient's body with the positioning apparatus includes engaging spaced apart locations on the patient's body with the positioning apparatus.

231. A method as set forth in claim 225 further including the step of magnetically attracting a leading end portion of the elongated member with a magnet disposed outside of the patient's body during performance of said step of moving the elongated member into the patient's body.

232. A method as set forth in claim 225 further including the step of positioning a magnet adjacent to a

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2

portion of the patient's body and promoting movement of a leading end portion of the elongated member into the patient's body under the influence of a magnetic field emanating from the magnet during movement of the guide rod into the patient's body.

233. A method as set forth in claim 225 wherein said step of moving the elongated member into the patient's body includes detecting when a leading end portion of the elongated member is in a position other than a desired position and applying force against the leading end portion of the elongated member to move the leading end portion of the elongated member toward the desired position.

234. A method as set forth in claim 225 further including the step of transmitting an image from a leading end portion of the elongated member to a location outside of the patient to facilitate visualization of tissue disposed in the patient's body adjacent to the leading end portion of the elongated member.

235. A method set forth in claim 225 further including the steps of providing a sensor assembly having an emitter portion which provides an output and a detector portion which responds to the output from the emitter portion, moving one of the emitter and detector portions of the sensor assembly into the patient's body with a leading end portion of the elongated member as the elongated member

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moves into the patient's body, positioning one of the emitter and detector portions of the sensor assembly adjacent to the portion of the patient's body engaged by the positioning apparatus, and determining when the leading end portion of the elongated member is in a desired position relative to the patient's body as a function of a response from the detector portion of the sensor assembly during movement of the elongated member into the patient's body.

236. A method as set forth in claim 235 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's body with the leading end portion of the elongated member includes moving the emitter portion of the sensor assembly into the patient's body with the leading end portion of the elongated member, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the portion of the patient's body engaged by the positioning apparatus includes positioning the detector portion of the sensor assembly adjacent to the portion of the patient's body engaged by the positioning apparatus.

237. A method as set forth in claim 236 wherein said step of moving the emitter portion of the sensor assembly into the patient's body with the leading end portion of the elongated member includes moving a magnet into the patient's body with the leading end portion of the elongated

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member, said step of positioning the detector portion of the sensor assembly adjacent to the portion of the patient's body engaged by the positioning apparatus includes positioning a device which responds to a magnetic field adjacent to the patient's Adam's apple.

238. A method as set forth in claim 235 wherein said step of moving one of the emitter and detector portions of the sensor assembly into the patient's body with the leading end portion of the elongated member includes moving the detector portion of the sensor assembly into the patient's body with the leading end portion of the elongated member, said step of positioning one of the emitter and detector portions of the sensor assembly adjacent to the portion of the patient's body engaged by the positioning apparatus includes positioning the emitter portion of the sensor assembly adjacent to the portion of the patient's body engaged by the positioning apparatus.

239. A method as set forth in claim 238 wherein said step of moving the detector portion of the sensor assembly into the patient's body with the leading end portion of the elongated member includes moving a device which responds to magnetic fields into the patient's body with the leading end portion of the elongated member, said step of positioning the emitter portion of the sensor assembly adjacent to the portion of the patient's body includes

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